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ABSTRACT

The information reported in this paper is based on data from the Professional Personnel Register for the school years 1967-68 through 1974-75. The paper presents a comparison of the employment patterns by curriculum for all teachers employed in the public schools of Michigan during these periods. It illustrates patterns of employment of all teachers in the state as well as employment of new teachers in Michigan and in the particular intermediate school districts of Macomb, Oakland, and Wayne. The 13 curriculum areas identified are language arts, social science, special education, mathematics, science, health and physical education, industrial arts, music, home economics, arts and crafts, elementary education, foreign languages, and business education. The report shows (1) the total number of professionals employed annually in each curriculum and the percent change from the previous year, (2) the total number of new professionals who did not have prior teaching experience employed annually in each field, and (3) trends in employment of all teachers by curriculum. (JMF)

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COMPARISON OF EMPLOYMENT PATTERNS BY CURRICULUM FOR PUBLIC SCHOOL TEACHERS IN ALL MICHIGAN DISTRICTS AND IN THE INTERMEDIATE SCHOOL DISTRICTS OF MACOMB, OAKLAND, & WAYNE

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September 15, 1975

SP009 763

Purpose:

This paper presents a comparison of the employment patterns by curriculum for all teachers employed in the public schools of Michigan during 1967 through 1975. It illustrates patterns of employment of all teachers in the state as well as employment of new teachers in Michigan and in the intermediate school districts of Macomb, Oakland and Wayne.

Procedures:

The information reported in this paper is based upon an analysis of computer tapes of the Professional Personnel Register for the school years 1967-1968 through 1974-1975. Since the Michigan Department of Education did not collect information for the Register during 1971-1972 school year, the data points for that school year were interpolated.

The data in the Register are collected and maintained by the Teacher Education and Professional Services Division of the Michigan Department of Education. The data were analyzed with programs written for Wayne State's IBM 360/67 computer.

The tri-county area refers to the intermediate school districts of Macomb, Oakland, and Wayne, which are explicitly identified in the Register. For each teacher, the Register reports the number of years teaching experience, which indicates whether or not a given teacher was new, e.g. zero years teaching experience.

Thirteen curriculum areas were identified and teachers were counted who had major teaching assignments in those curriculum areas during a given school year. The following curriculum areas are considered in this report: language arts, social science, special education, mathematics, science, health and physical education, elementary education, foreign languages, business education, industrial arts, music, home economics, arts and crafts. The count for each curriculum does not include professional personnel classified as administrative or supervisory.

Discussion of Results:

Table 1 lists the total number of professionals employed annually in each curriculum area and the number in parentheses indicates the percent change from the previous year. In the 1974-75 school year, there was a decline of less than 1% in the total number of professionals in language arts, foreign language, and elementary education. All of the other areas registered gains in total personnel in 1974-75, with special education increasing more than 10% and business education increasing less than 1%.

Table 2 lists the total number of new professionals who did not have prior teaching experience and who were employed annually in each curriculum field. It is apparent that there has been a decreasing number new teachers employed in almost every curriculum area. In 1974-75, the reduction in employment of new teachers reached -32% for language arts and even special education register a change of -2%. Only home economics reflected a positive increase in the

number of new teachers employed from 1973-74 to 1974-75. The persistency of this decrease in employment of new teachers is evident in the reduction of -16% of the total new teachers employed from 1972-73 to 1973-74 and a further drop of -17% of the total new teachers employed from 1973-74 to 1974-75.

The graphs in figures 1-13 illustrate trends in employment of all teachers in Michigan public schools. Each page represents a different curriculum area, e.g. language arts, science.

The figure on the left illustrates the trend in employment of all teachers in that curriculum in Michigan. The figure on the right compares only the number of new teachers (zero years teaching experience) in that curriculum in Michigan to the number of new teachers in the tri-county area.

Language Arts

Figure 1 indicates growth in employment of language arts teachers in Michigan until 1971-72 school year. For the next three years, the total number of language arts teachers has not changed appreciably from an average of 7,735 teachers.

For new teachers, there has been a sharp decrease in their rate of employment throughout the state. The rate of change does not appear to be leveling off, and one may expect a continuation of low employment opportunities for new language arts teachers in Michigan in 1975-76.

Social Science

Figure 2 indicates a low rate of growth in employment of social science teachers.

For new teachers, there was a general decrease in employment until 1971-72. Thereafter, employment was stable in the tri-county area through 1974-75, but there was another drop in employment in schools out-of-tri-county during 1974-75. Prospects for employment of new social science teachers will probably continue to be poor during 1975-76.

Science

Figure 3 indicates a low growth rate in employment of science teachers in Michigan.

For new teachers, employment reached a peak in 1969-70 and has been decreasing ever since. Teacher placement offices have indicated scarcity of science teachers in 1973-74 and 1974-75. Therefore, the decreasing employment rate shown in Figure 3 appears to be due to undersupply rather than to a surplus of eligible new teachers.

Mathematics

Figure 4 indicates a low growth rate in employment of mathematics teachers and the rate is very similar to the rate for employment of science teachers.

For new teachers, employment reached a peak in 1969-70 and has been decreasing ever since. In tri-county and out-of-tri-county schools,

the pattern of decreasing employment of new mathematics teachers is very similar to the pattern for employment of new science teachers and it also appears to be attributable to an undersupply of new mathematics teachers.

Foreign Language

Figure 5 indicates a stable pattern of employment of foreign language teachers throughout the State.

For new teachers, there was a drop in employment from 1969-70 through 1971-72. However, the number of new teachers of foreign language has stabilized at about 100 new personnel each year in Michigan.

Business Education

Figure 6 indicates a stable pattern in the employment of business education teachers for the past six years.

For new teachers, there has been a slowly declining rate of employment since 1970. Since teacher placement offices have classified this curriculum area as having an insufficient supply of teachers, we conclude that this decreasing employment is due to undersupply of qualified personnel.

Industrial Arts

Figure 7 indicates a gradual increasing rate in the employment of industrial arts teachers in Michigan.

The curves indicating employment of new industrial arts teachers

from 1972-1973 through 1973-1974 are very similar to the curves showing employment of new business education teachers. Since industrial arts teachers are also in short supply, it appears that the declining rate of employment of new industrial arts teachers is due to undersupply of these teachers.

Music

Figure 8 indicates a very slight increase in employment of music teachers in Michigan.

For new teachers there was a slight increase in the rate of employment of music teachers out-state in 1972-73, but this stabilized. In the tri-county area there has not been a major change in the number of new teachers employed during the past eight years.

Home Economics

Figure 9 indicates no change in the total of home economics teachers during the past seven years.

For new teachers, there was a slight increase in employment from 1967 through 1970, but this declined and employment opportunities for new teachers have been stable during the last three years.

Arts and Crafts

Figure 10 indicates a gradual increase in the total number of arts and crafts teachers employed.

For new teachers, there appears to be a stable pattern of employment in the tri-county area and out-state.

Health and Physical Education

Figure 11 indicates an increase in the number of health and physical education teachers throughout the past seven years.

For new teachers, employment has declined rather sharply in out-state schools and the decline was smaller in the tri-county schools. Previously, the employment opportunities for health and physical education teachers was considerably greater in schools outside the tri-county area, but this difference has been almost eliminated in 1974-75.

Elementary Education

Figure 12 indicates a continuing decline in the number of elementary teachers employed in Michigan schools during the past two years.

For new teachers, the very sharp decrease in employment is evident in Figure 12. In the tri-county schools, the decline appears to be stabilizing at about 500 new teachers employed per year. However, opportunities for employment in schools outside the tri-county area are decreasing at a rapid rate.

Special Education

Figure 13 indicates the sharp increase in the number of special education teachers which started in 1968, reached a plateau during 1971-1972, and spurted upward with the passage of the Mandatory Special Education Law in 1973.

For new teachers in the tri-county area, the employment pattern was very similar to the pattern of employment of all special education teachers in Michigan. However, employment outside the tri-county schools started increasing in 1969 and has continued to increase until 1973-74.

In conclusion, one should be cautious about interpreting these empirical curves as indicators of demand. If we also consider trends in placement of teachers and the numbers of newly certified teachers in various fields, we should be able to identify patterns of employment opportunity for our students in teacher education programs.

TABLE 1

NUMBER OF TEACHERS IN MAJOR CURRICULUM ASSIGNMENTS IN MICHIGAN PUBLIC SCHOOLS DURING 1967-1975

	Major Assignment	Number in 1967-1968	Number in 1968-1969	Number in 1969-1970	Number in 1970-1971	Number in 1972-1973	Number in 1973-1974	Number in 1974-1975
1.	Language Arts	6728	7241 (7.6%)	7378 (1.9%)	7583 (2.8%)	7731 (2%)	7743 (.1%)	7732 (-.1%)
2.	Social Science	5096	5429 (6.5%)	5592 (3%)	5684 (1.6%)	5918 (4.1%)	6022 (1.8%)	6112 (1.5%)
3.	Science	3797	4152 (9.3%)	4293 (3.4%)	4465 (4%)	4705 (5.4%)	4783 (1.7%)	4866 (1.7%)
4.	Mathematics	4153	4580 (10.3%)	4740 (3.5%)	5106 (7.7%)	5300 (3.8%)	5438 (2.6%)	5551 (2.1%)
5.	Foreign Lang.	1519	1578 (3.9%)	1590 (1%)	1406 (-11.6%)	1446 (2.8%)	1429 (-1.1%)	1416 (-.9%)
6.	Business Educ.	2491	2671 (7.2%)	2715 (1.6%)	2813 (3.6%)	2836 (1%)	2840 (0%)	2846 (.2%)
7.	Industrial Arts	2399	2540 (5.9%)	2663 (4.8%)	2901 (8.9%)	3018 (4.0%)	3086 (2.3%)	3216 (4.2%)
8.	Music	2411	2668 (10.7%)	2753 (3.2%)	2847 (3.4%)	2965 (4.1%)	3105 (4.7%)	3199 (3%)
9.	Home Economics	1615	1745 (8.1%)	1820 (4.3%)	1896 (4.2%)	1839 (3%)	1875 (2%)	1905 (1.6%)
10.	Arts & Crafts	1591	1775 (10.3%)	1880 (7.1%)	2029 (7.9%)	2187 (7.8%)	2258 (3.3%)	2370 (5%)
11.	Health & Physical Education	3335	3656 (9.6%)	3854 (5.4%)	4127 (7.1%)	4460 (8.1%)	4648 (4.1%)	4768 (2.6%)
12.	Miscellaneous	6968	7223 (3.7%)	7538 (4.4%)	7839 (4.0%)	8558 (9.2%)	9015 (5.3%)	9675 (7.3%)
13.	Elementary Grades	38222	39688 (4%)	39997 (1%)	39858 (0%)	39863 (0%)	38776 (-3%)	38453 (-.8%)
14.	Special Educ.	4167	5198 (24.5%)	5617 (8.1%)	6043 (7.6%)	5998 (-1%)	6649 (11%)	7356 (10.6%)
	TOTAL *	84492	90124 (6.7%)	92430 (2.6%)	94597 (2.3%)	96824 (2.4%)	97667 (.9%)	99465 (1.8%)

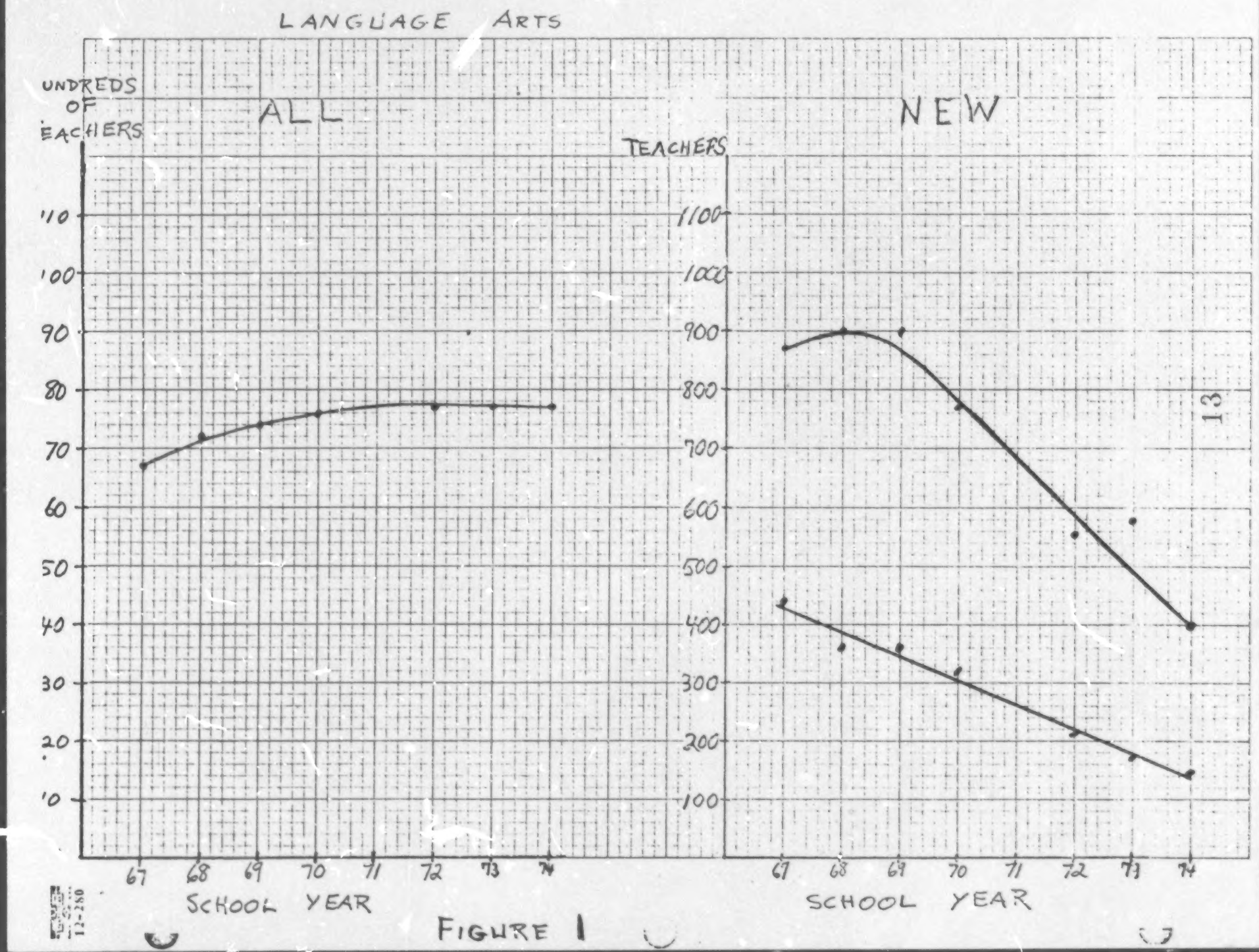
*Does not include teachers in agriculture, vocational education, fine arts, humanities

TABLE 2

NUMBER OF TEACHERS IN MAJOR CURRICULUM ASSIGNMENTS IN MICHIGAN PUBLIC SCHOOLS (1967-1975) WHO DO NOT HAVE PRIOR TEACHING EXPERIENCE

	Major Assignment	Number in 1967-68	Number in 1968-69	Number in 1969-70	Number in 1970-71	Number in 1972-73	Number in 1973-74	Number in 1974-75
1)	Language Arts	874	898 (3%)	898 (0%)	770 (-14%)	556 (-28%)	582 (5%)	395 (-32%)
2)	Social Science	500	443 (-11%)	471 (6%)	342 (-27%)	318 (-7%)	301 (-5%)	246 (-18%)
3)	Science	331	398 (20%)	413 (4%)	361 (-13%)	328 (-9%)	263 (-20%)	206 (-22%)
4)	Mathematics	336	476 (42%)	488 (3%)	459 (-6%)	365 (-20%)	342 (-6%)	265 (-23%)
5)	Foreign Languages	183	189 (3%)	203 (7%)	136 (-33%)	119 (-13%)	118 (-1%)	99 (-16%)
6)	Business Education	230	258 (12%)	242 (6%)	243 (1%)	209 (-14%)	176 (-16%)	154 (-13%)
7)	Industrial Arts	159	208 (31%)	254 (22%)	245 (-4%)	275 (12%)	240 (-13%)	197 (-18%)
8)	Music	164	223 (36%)	210 (-6%)	206 (-2%)	240 (17%)	285 (19%)	256 (-10%)
9)	Home Economics	146	192 (32%)	198 (3%)	204 (3%)	146 (-28%)	148 (1%)	162 (10%)
10)	Arts & Crafts	190	211 (11%)	233 (10%)	251 (8%)	210 (-16%)	237 (13%)	184 (-22%)
11)	Health & Physical Educ.	269	343 (28%)	366 (7%)	377 (3%)	359 (-5%)	349 (-3%)	249 (-29%)
12)	Miscellaneous**	268	270 (1%)	283 (5%)	254 (-10%)	347 (37%)	429 (24%	427 (-1%)
13)	Elementary Grades	3053	3484 (14%)	3746 (8%)	3293 (-12%)	2598 (-21%)	2164 (-17%)	1712 (-21%)
14)	Special Educ.	369	381 (3%)	515 (35%)	556 (8%)	651 (17%)	863 (33%)	843 (-2%)
	TOTAL*	7072	8974 (27%)	8520 (-5%)	7696 (-10%)	7721 (1%)	6497 (-16%)	5395 (-17%)

*Does not include teachers in agriculture, vocational education, fine arts, humanities
**Miscellaneous category primarily composed of counselors, library science, reading junior high teachers


LANGUAGE ARTS
UNDREDS OF EACHERS
ALL
110
100
90
80
70
60
50
40
30
20
10
67
68
69
70
71
72
73
74
SCHOOL YEAR
NEW
TEACHERS
1100
1000
900
800
700
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500
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100
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68
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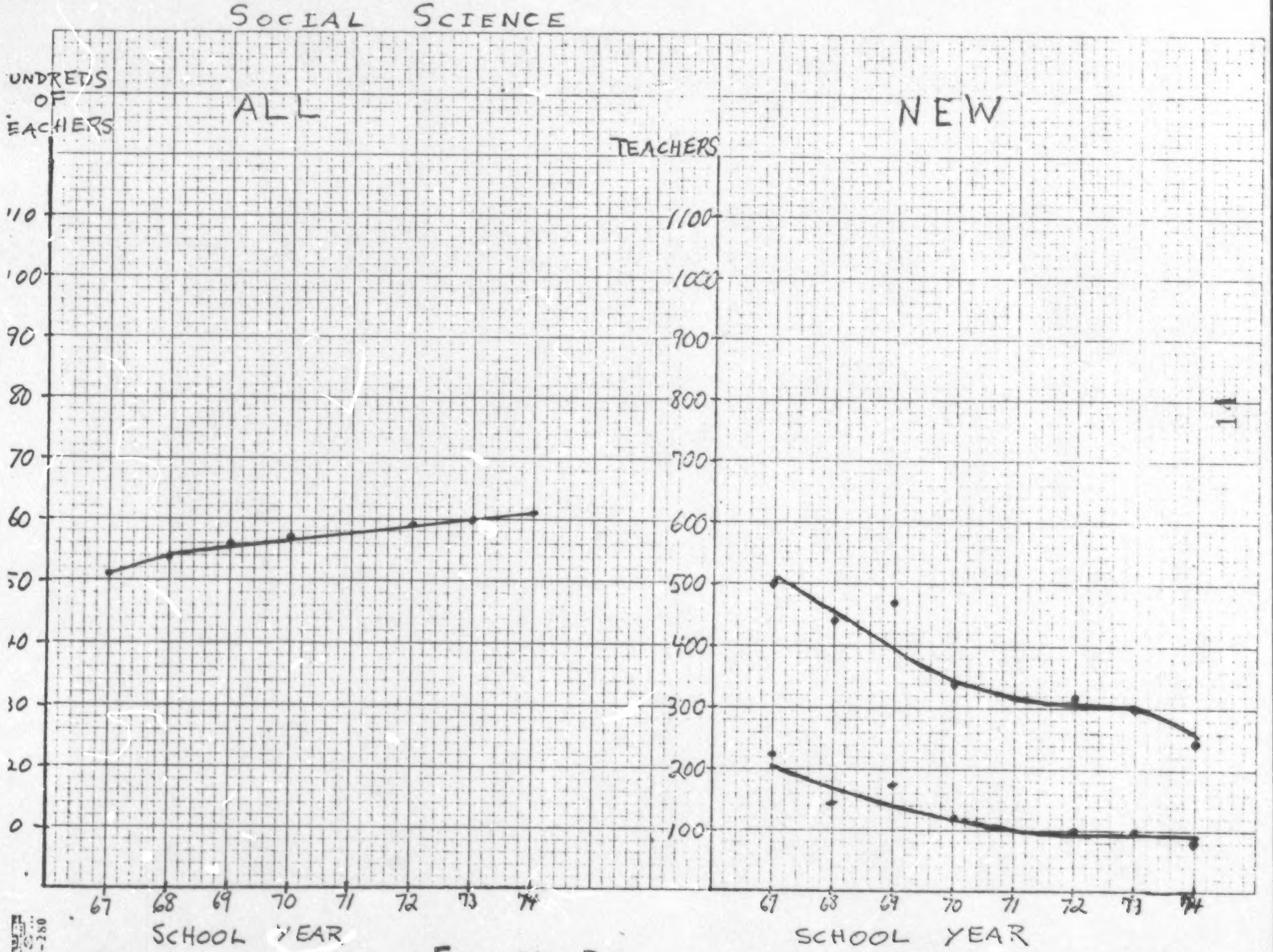
73
74
SCHOOL YEAR
13

FIGURE 1


SOCIAL SCIENCE
ALL
NEW
HUNDREDS OF TEACHERS
TEACHERS
110
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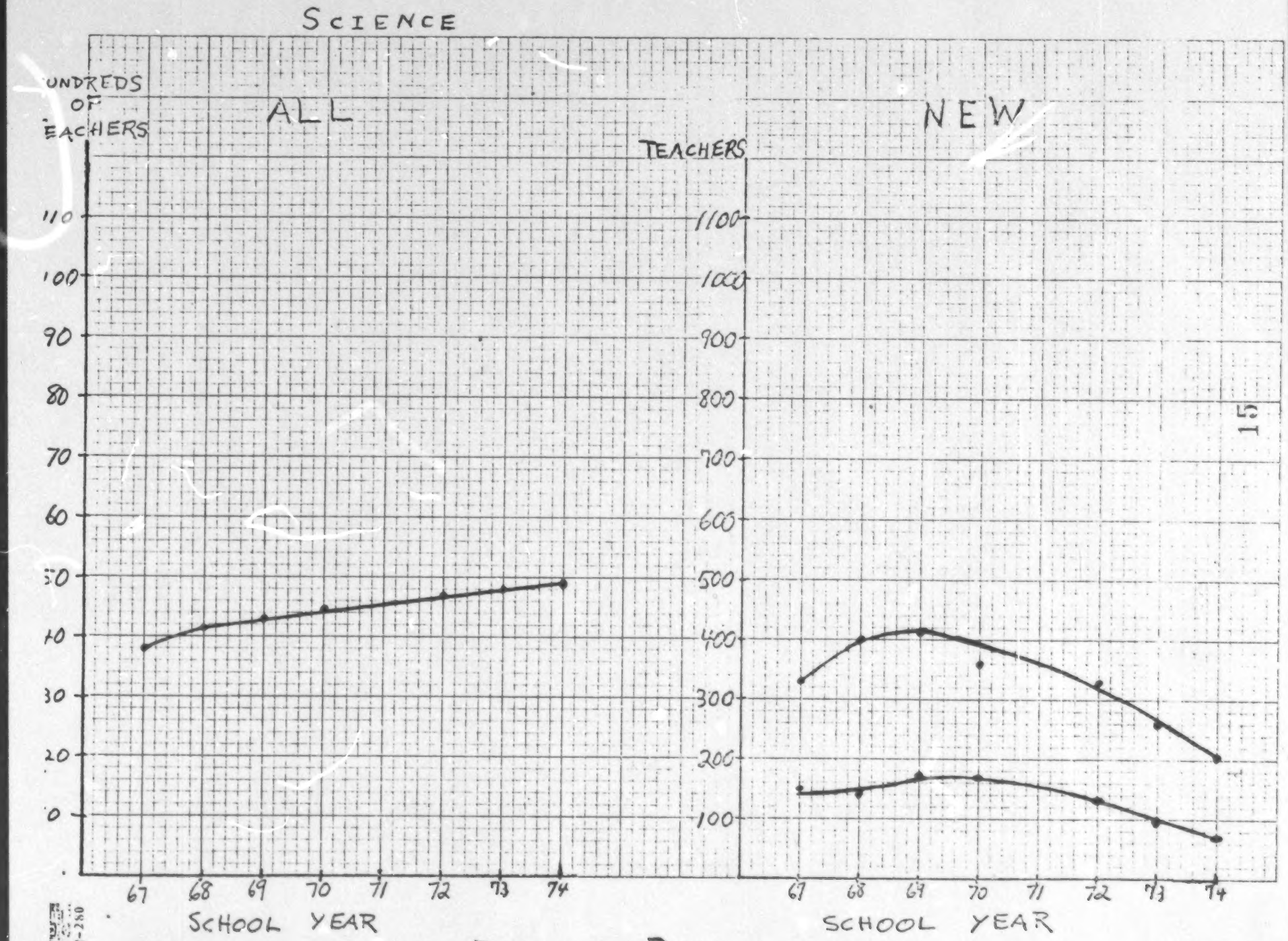
72
73
74
SCHOOL YEAR
SCHOOL YEAR

FIGURE 2


SCIENCE
UNDREDS OF EACHERS
ALL
110
100
90
80
70
60
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20
0
67
68
69
70
71
72
73
74
SCHOOL YEAR
NEW
TEACHERS
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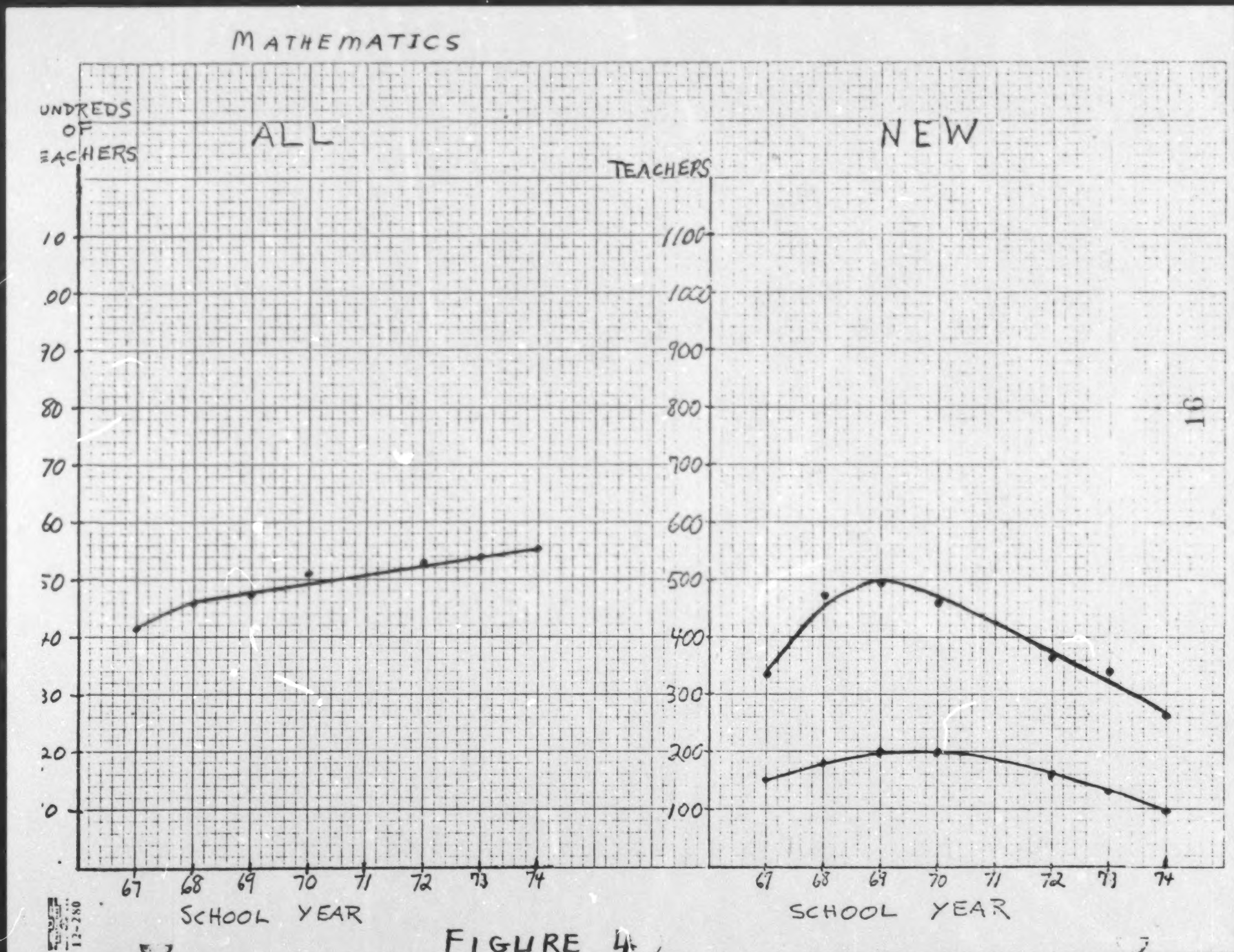
71
72
73
74
SCHOOL YEAR

FIGURE 3


MATHEMATICS
UNDREDS OF EACHERS
ALL
10
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SCHOOL YEAR
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200
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67
68
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71
72
73
74
SCHOOL YEAR
12-280

FIGURE 4

FOREIGN LANGUAGE

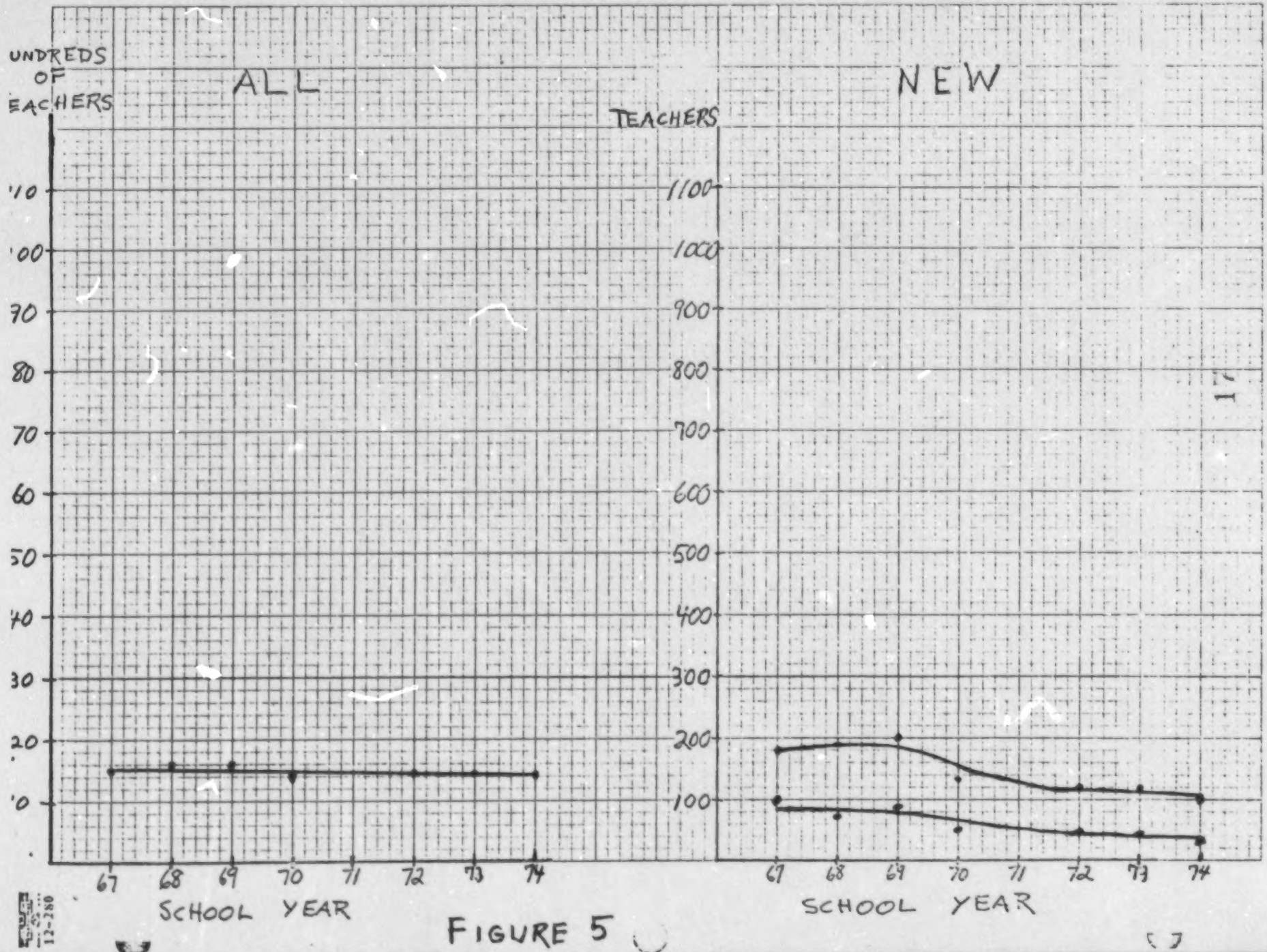


FIGURE 5

BUSINESS EDUCATION

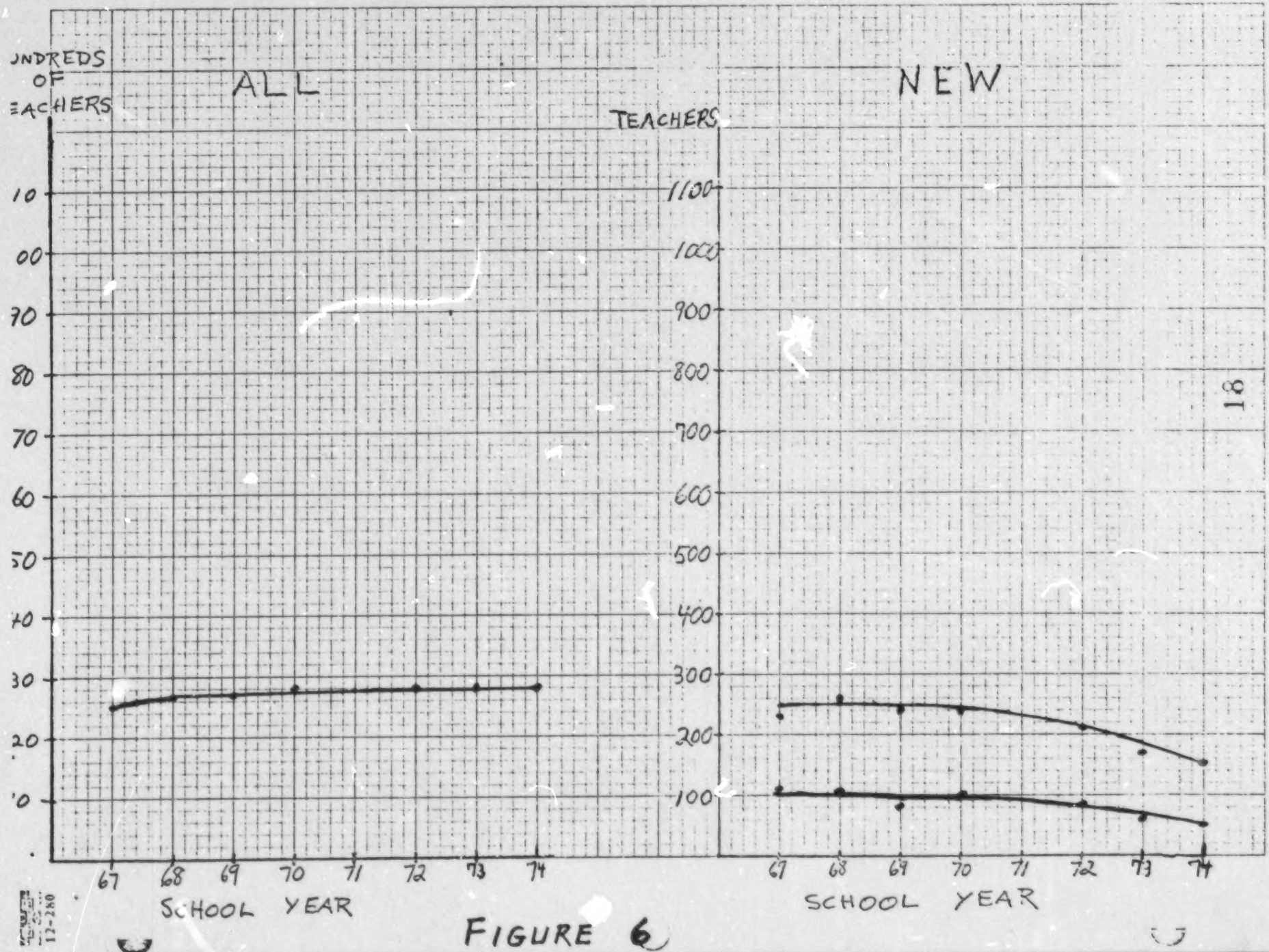


FIGURE 6

INDUSTRIAL ARTS

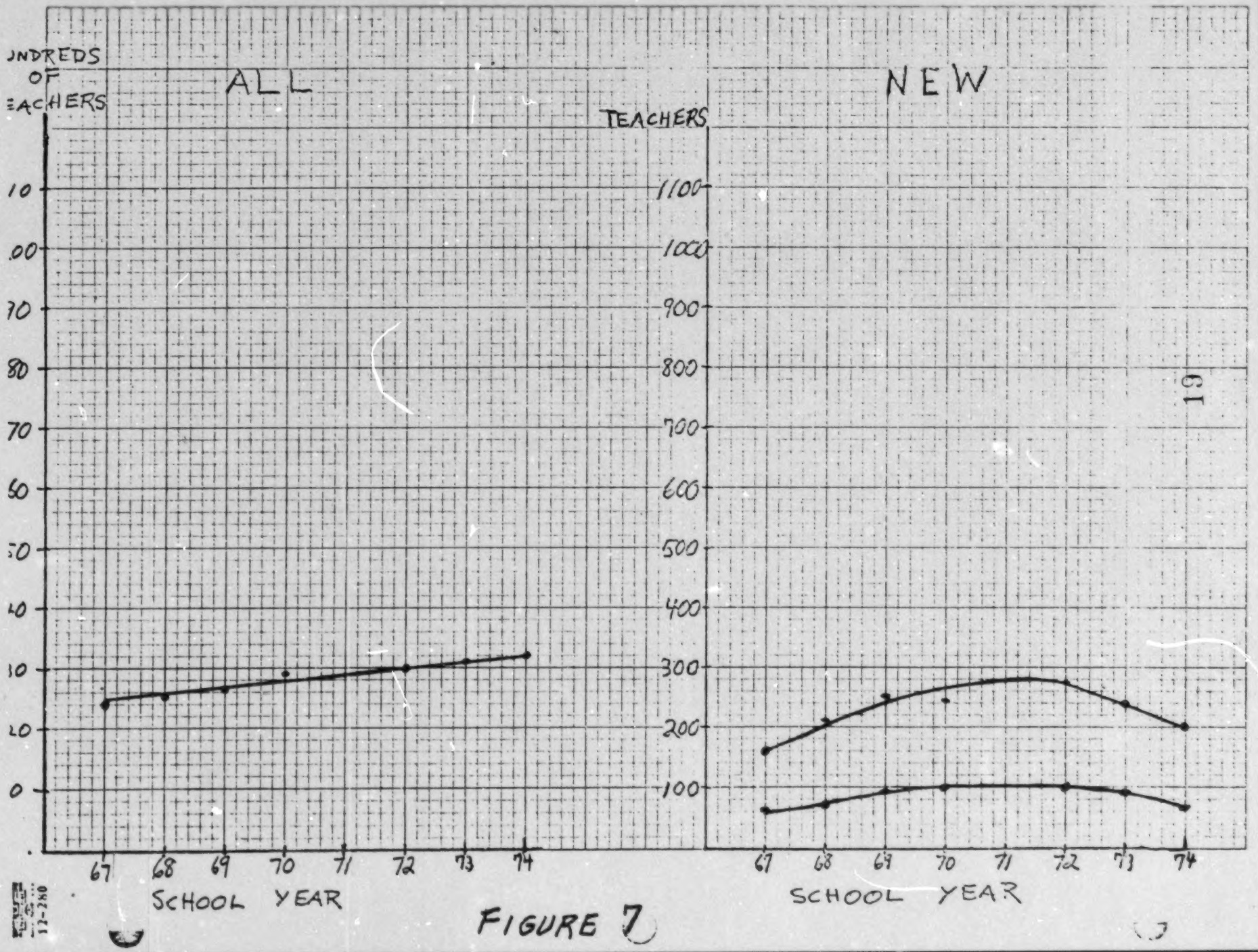
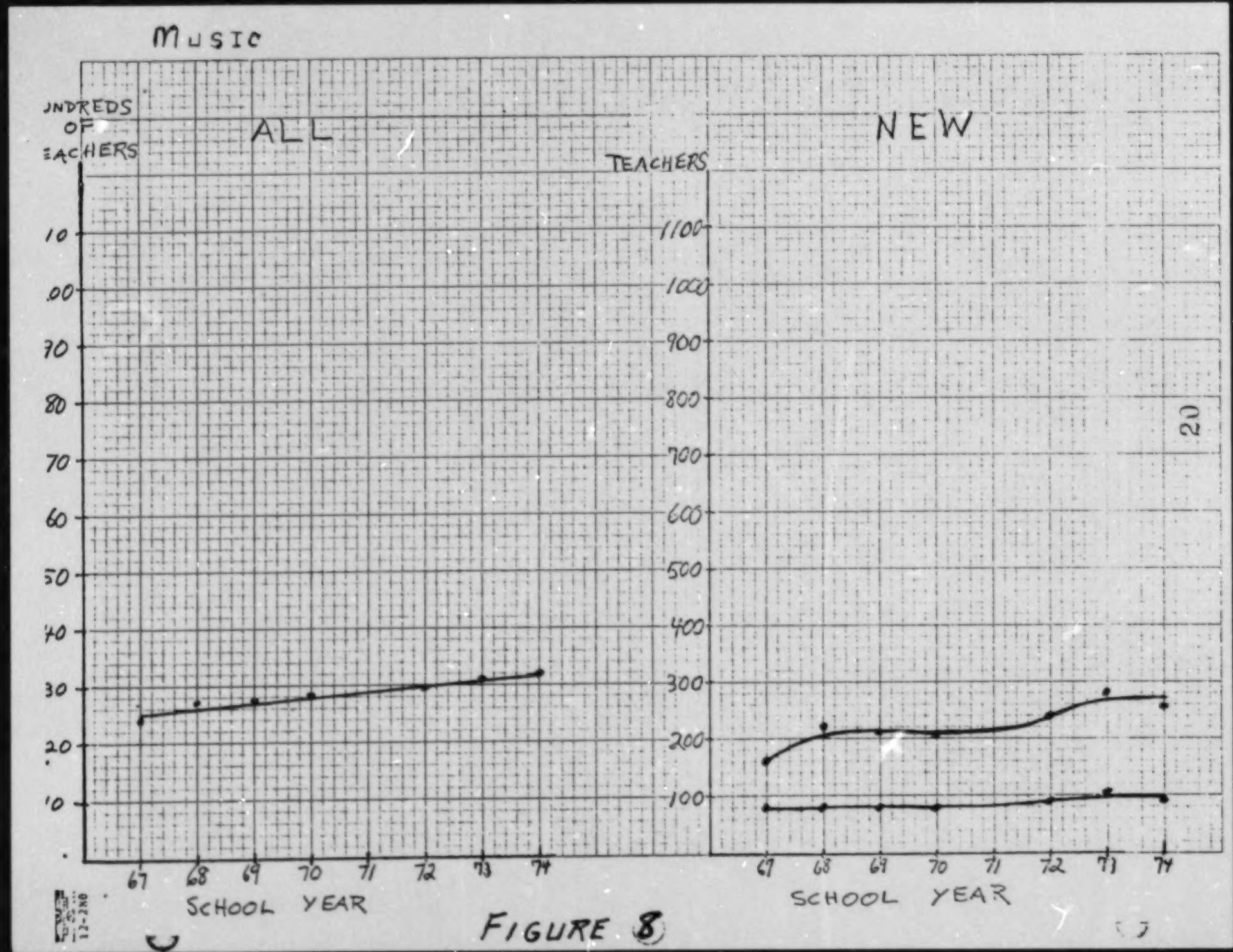


FIGURE 7


MUSIC
UNDREDS OF TEACHERS
ALL
NEW
TEACHERS
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74
SCHOOL YEAR
SCHOOL YEAR
20

FIGURE 8

HOME ECONOMICS

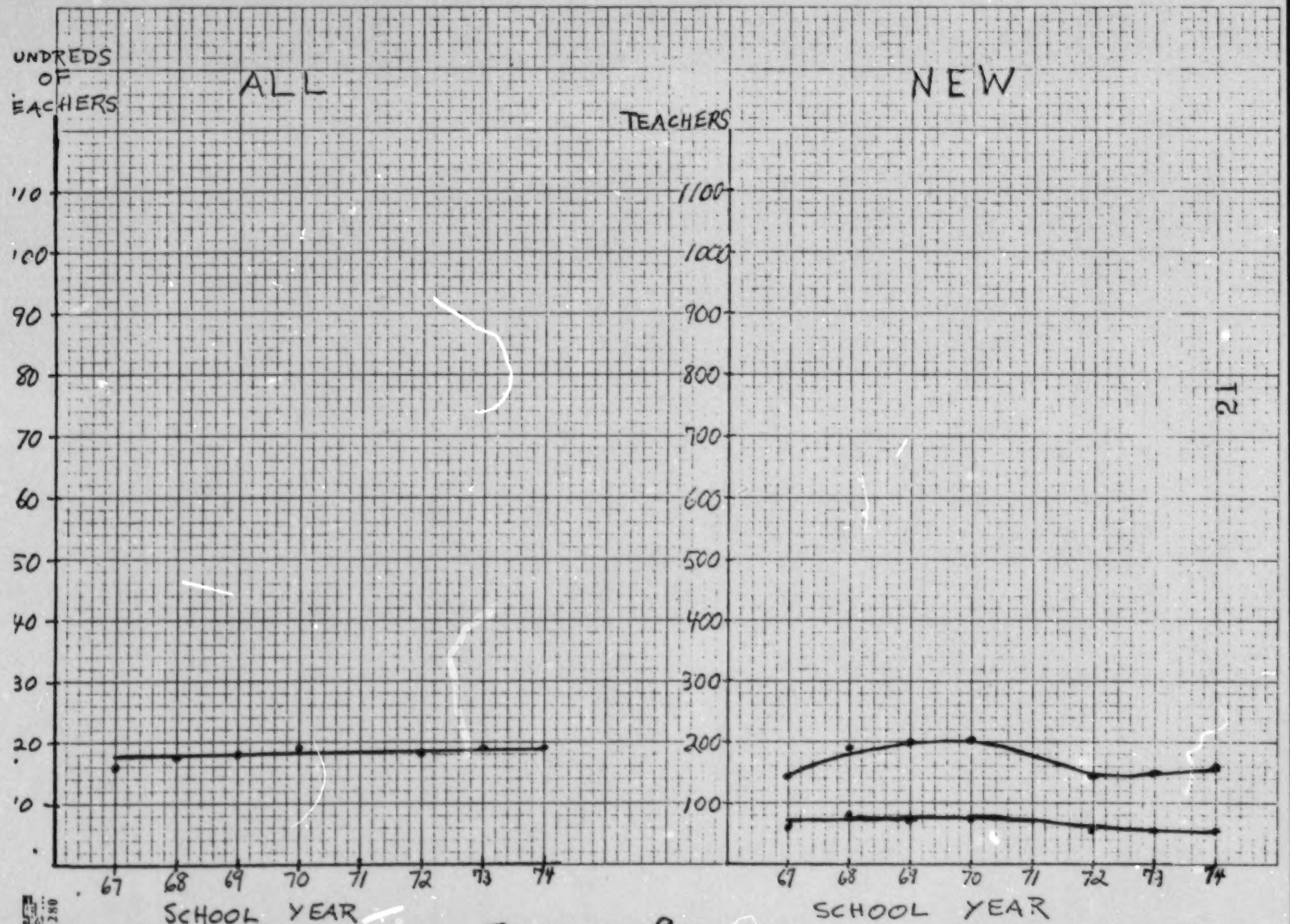


FIGURE 9

ARTS AND CRAFTS

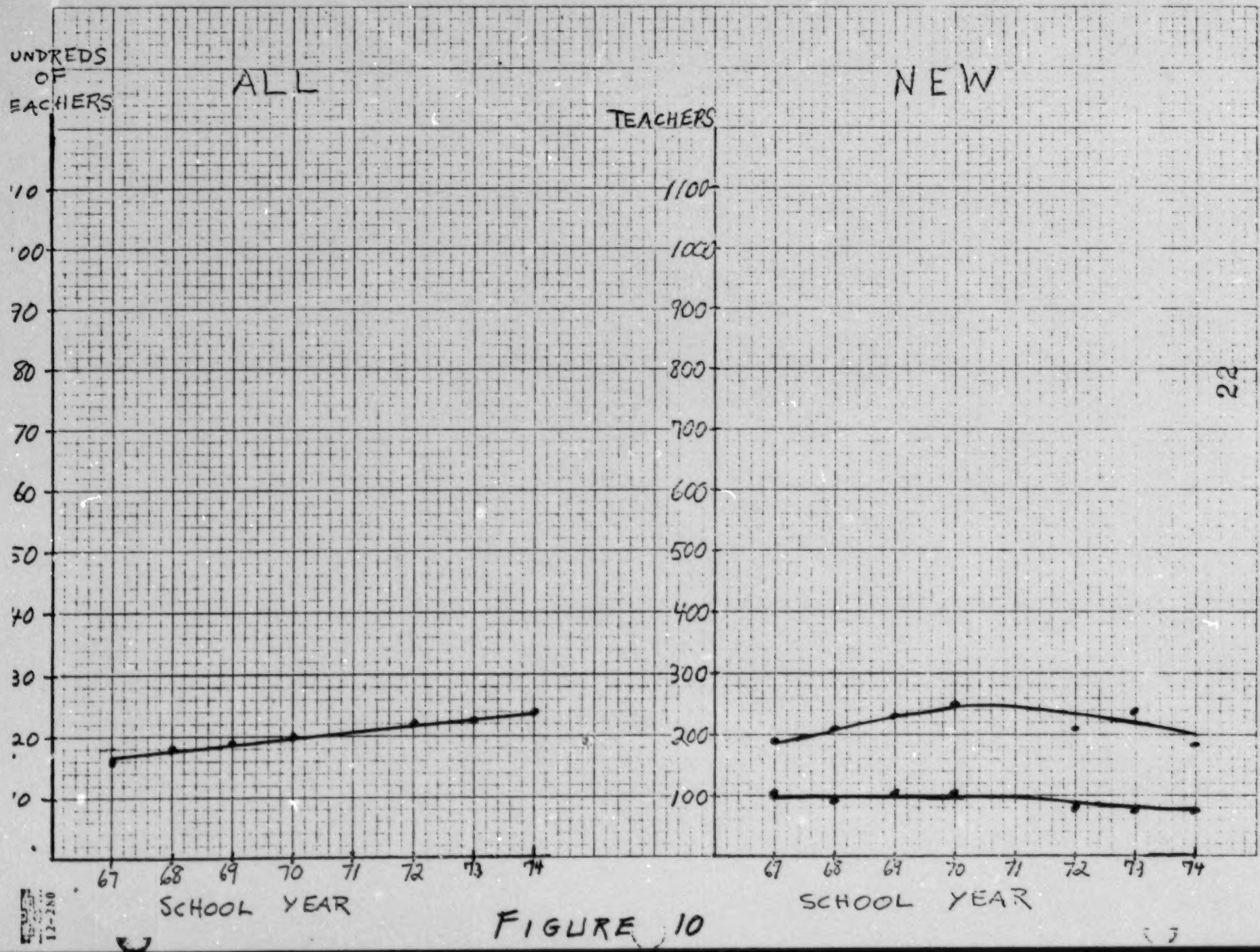


FIGURE 10

HEALTH AND PHYSICAL EDUCATION

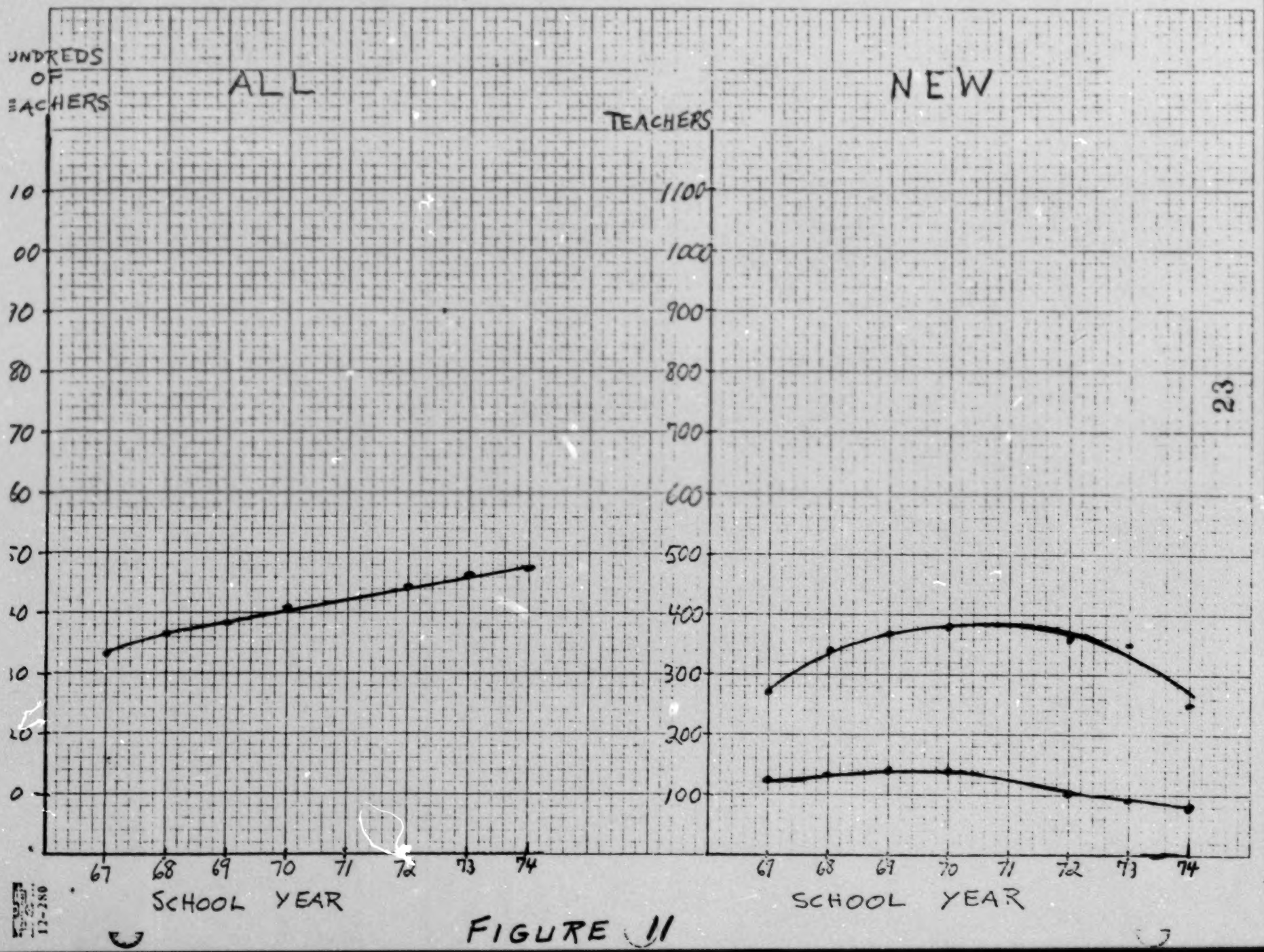
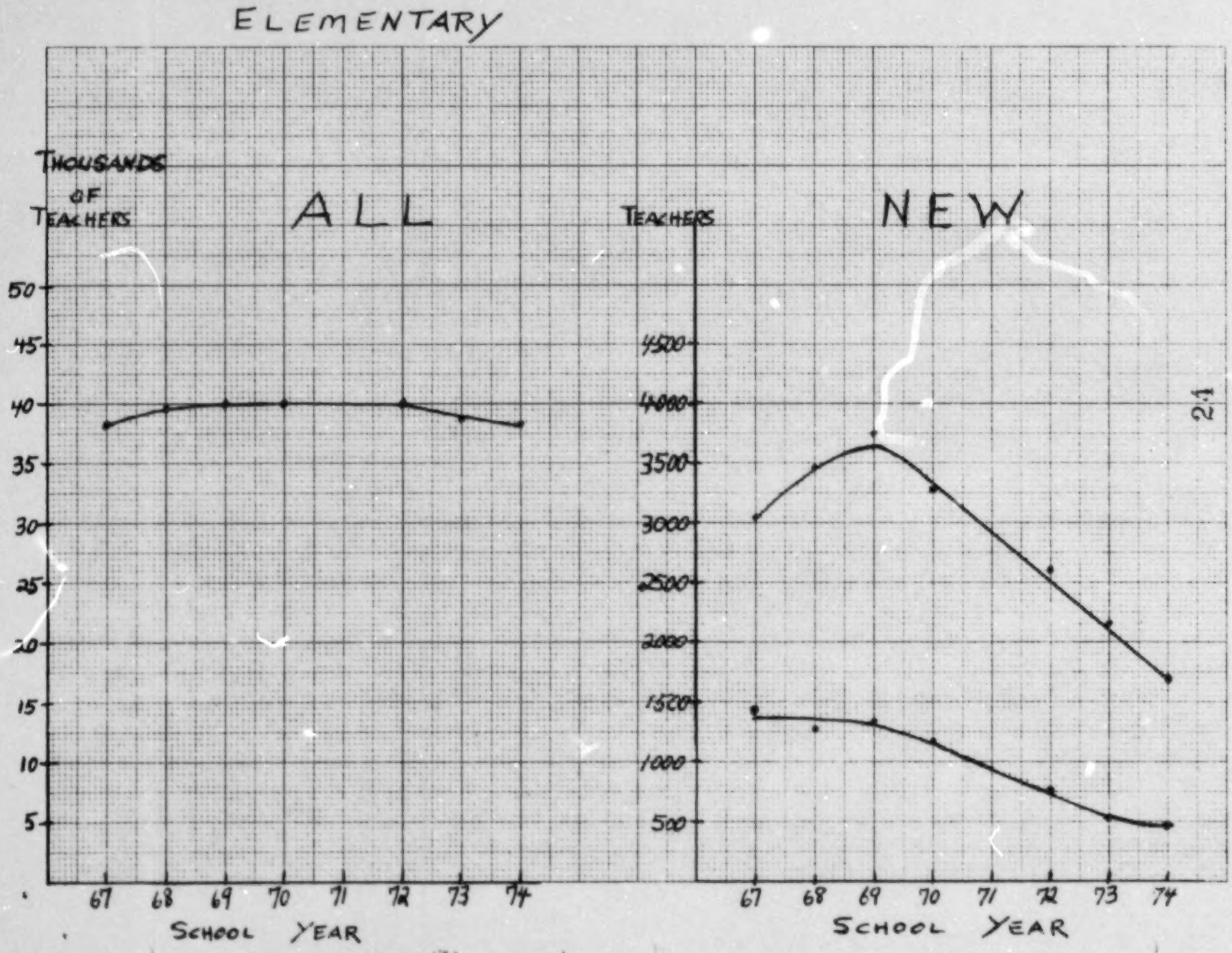


FIGURE 11


ELEMENTARY
THOUSANDS OF TEACHERS
ALL
50
45
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25
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72
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74
SCHOOL YEAR
TEACHERS
NEW
4500
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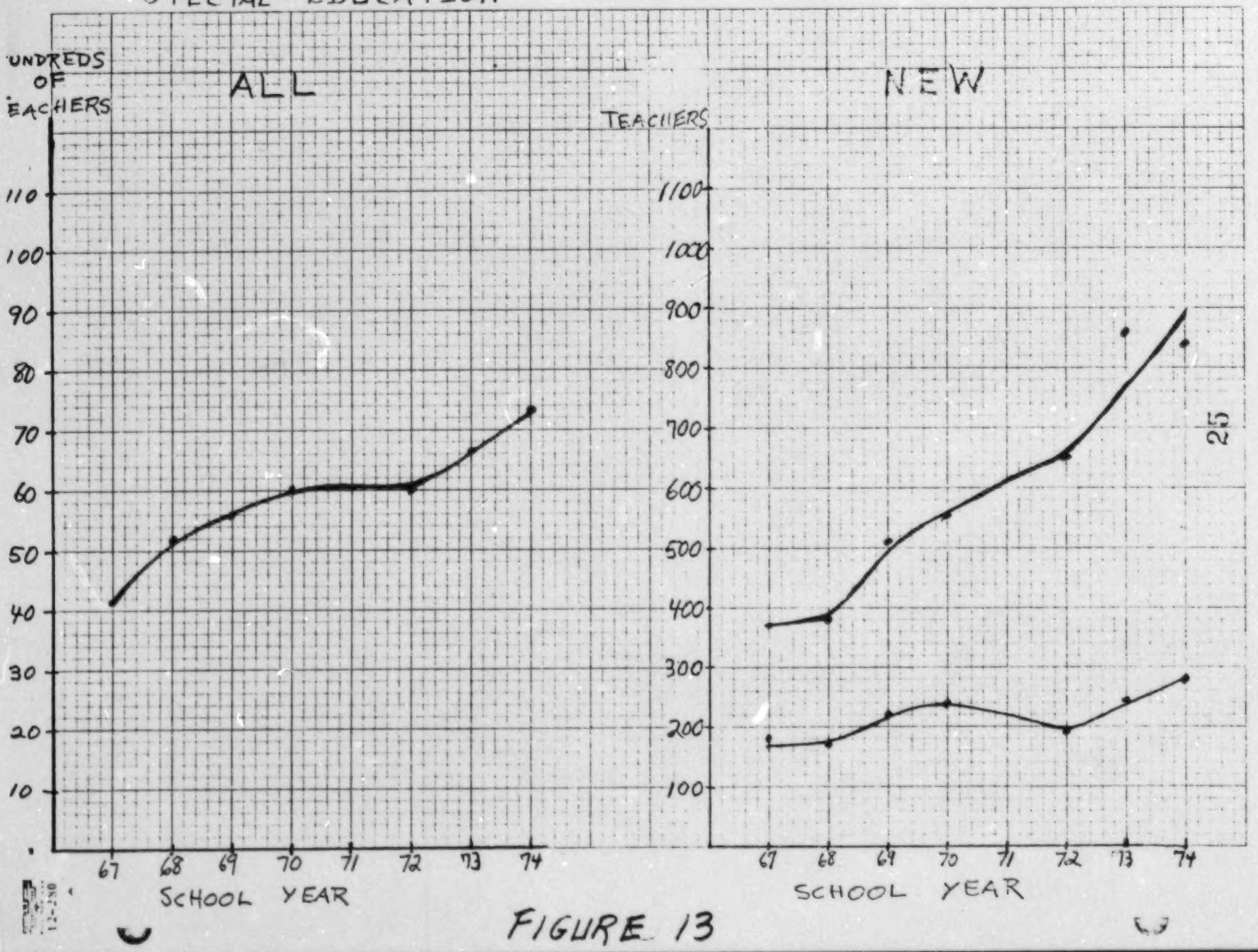
74
SCHOOL YEAR
2.1

FIGURE 12


SPECIAL EDUCATION
ALL
HUNDREDS OF TEACHERS
110
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SCHOOL YEAR
NEW
TEACHERS
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73
74
SCHOOL YEAR
25

FIGURE 13